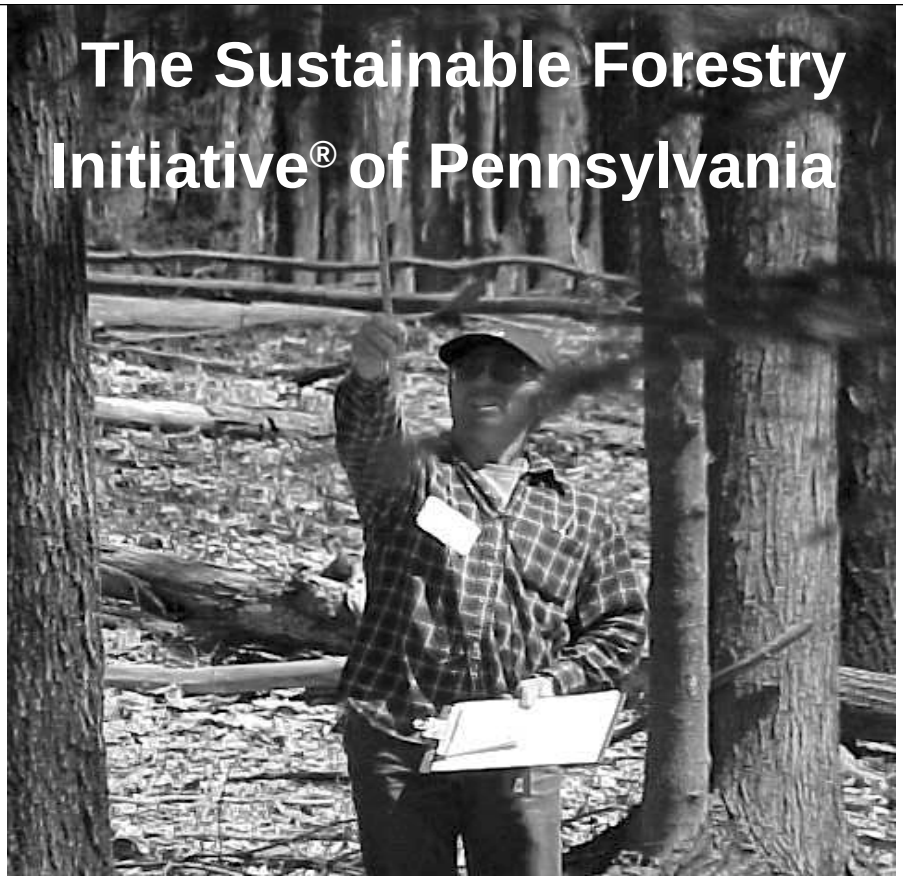
The Sustainable Forestry Initiative® of Pennsylvania



SFI IMPLEMENTATION COMMITTEE

Pennsylvania

Spring/Summer Issue 2003

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The Current Forest Inventory for Pennsylvania

Research forester, Will McWilliams, from the U. S. Department of Agriculture Forest Service, presented the findings from the third year of the current Forest Inventory in Pennsylvania, at the Roach-Bauer Forum (formerly the Ben Roach Forum) in April. The forum has been renamed to commemorate the life of PA Game Commission forester, Robert Bauer, and is held biannually at the Kane Country Club in Kane, PA. It features guest speakers addressing current forestry issues.

The data was compiled by the Forest Service from a grid of new and old plots laid out across the entire state. State Forester, Dr. Jim Grace, initiated that the forest census be taken over five years (instead of seven) and implemented a regeneration study. Department od Conservation and Natural Resources (DCNR) foresters will have a list of 30 invasive species they will be looking for when they tally the individual plots. Future studies will look at the presence of exotic invasive species as well as native invasive species and their impact on the existing forest. Funding for inventory extras, like regeneration and the invasive species study, is from the Pennsylvania Bureau of Forestry.

Some of the information in McWIlliams' anticipated report was being presented for the first time. McWilliams started with the conclusion of the report: the area of forestland inventoried is stable. Statewide, the forests are reaching an age of economic maturity. Current board feet inventories are increasing but at slower rates. There is more timber in the state than in the late 1800s. All of the top-ten tree species in the state are increasing except sugar maple. Mc Williams said he will be interested in how the impact of sugar maple mortality will effect future studies. Red maple is the fastest regenerating tree in the state and has increased 21%. Forest types with red maple in the forest composition have increased by one third since the last census. Black cherry has also increased substantially by 21%. The oaks are rebounding from the gypsy moth infestations of the 1980s. The fastest rate of increase was for yellow poplar. Advanced regeneration is lacking in a majority of stands. Growing stock is slowing down, especially for sugar maples. Ecological maturity for many stands is in the not too distant future, giving rise to the possibility of what Mc Williams calls "young old growth," a new forestry oxymoron.

The Pennsylvania Forest Inventory is a team effort with people from the PA Bureau of Forestry, three Forest Service Research work units, the Allegheny National Forest and Penn State University reviewing the sample design and analyzing the data. They have produced a study which will measure the current forest regenera-

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(Issue #13)

The Sustainable Forestry Initiative (SFI) program is a voluntary, industry driven effort developed to ensure that future generations will have the same abundant, healthy, and productive forests we enjoy today. Created in 1995 by the American Forest & Paper Association (the national trade organization representing the United States forest products industry), SFI is a program of comprehensive forestry and conservation practices.

In order to broaden the practice of sustainable forestry in our state, an Implementation Committee was formed to develop the Sustainable Forestry Initiative of Pennsylvania. Today, the SFI of PA program works to ensure the progress of the national initiative, here in Pennsylvania.

Implementation Committee (IC) Members

Ken Roberts, Chairman, Mead Westvaco*
Matt Andrews, Deer Park Lumber
D. Wayne Bender, PA HDC
John Bouch, Pro. Timber Harvesting Inc.
Bill Bow, Appleton Papers, Inc.
Charlie Brown, Glatfelter Pulp Wood Co.*
Tom Buzby, Weaber, Inc.*
Blair Carbaugh, Private Landowner
Dan Evans, Weyerhaeuser*
Jim Finley, Penn State University
James Grace, Bureau of Forestry
Bob Hobbes, Hobbes Forestry
Dave Jackson, Tree Farm Program
Jeff Kochel, Forest Investment Associates*
Dave & Mark Krumenacker, Krumenacker Lumber Co.
Rich LaBrozzi, RAM Forest Products
John Levavasseur, Temple Inland Forest Products*
Paul Lyskava, PFPA
Ken Manno, SFI of PA
Ray Noll, SFI of PA
Gene Odato, Bureau of Forestry
Joe Glover, Plum Creek Timber Co.*
Dave Sienko, Sienko Forest Products
Sue Swanson, AHUG
Kevin Stout, Georgia-Pacific Corp.*
Susan Stout, USDA Forest Service
Todd Waldron, Craftmaster Manufacturing, Inc.
Mark Webb, Webb Forestry Consulting
Jay Farrell, AF&PA Liason
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Questions or comments regarding the SFI of PA newsletter, contact Ray Noll at 814-867-9299, 888-734-9366, or via e-mail at sfi@penn.com.

"Silviculture is the tool we will have to implement in order to confront the statewide regeneration problem."

—William McWilliams, research forester for the USDA Forest Service, presenting current Forest Inventory information at the Roach-Bauer Forum in Kane, PA.

Current Forest Inventory ***(continued)***

tion in detail. What they found is that if a stand of desirable species were managed for regeneration, two-thirds of the time that regeneration would fail because there was not enough advanced regeneration. Fifty percent of the commercial species would fail to regenerate, and forty percent of the woody species would fail to regenerate. Of the existing canopy now dominating a given stand, half would fail to regenerate based on the current advanced regeneration. The regeneration survey shows severe competition from ferns, grasses, and mountain laurel. There will be more detail in the next report.

McWilliams listed what he calls, "The three evil forces that effect forest land." The biggest is urbanization—people moving in and permanently converting the land. The second is parcelization where a large tract of forest is divided into smaller tracts. The land is then sold off and sometimes developed causing the last evil, fragmentation. This is having a profound effect in the northeast. Fragmentation contributes to a pattern of decreasing large tracts of woodland with a steady increase of smaller tracts. Pennsylvania has had a stable forest land base of 16.6 million acres, but the inventory shows a loss of about 100,000 acres of forestland in the past decade. Eight out of ten acres of forestland in PA is privately owned. Private forestland changes ownership on an average of ten years and is frequently sold into smaller parcels. McWilliams also points out that the numbers are slippery because land is going in and out of forest land status at the rate of a half million acres between inventories, roughly every five years. Future studies will also be looking at land fragmentation and parcelization.

Mc Williams discussed stand size class— the classification of the land according to the size of the trees. This inventory focused on what size tree predominates the stand in terms of stocking, whether it is a seedling-sapling, pole timber, or sawtimber. Sawtimber stands are dominated by trees nine to eleven inches in diameter, both hardwoods and softwoods entering economic maturity, and account for 58% of the forests in the state. Pole timber, (five inches and larger but less than sawtimber in diameter) has remained constant at 31% of the forest land. The area for concern is the saplings (five inches or less in diameter) because they represent the future forest—and they are decreasing. Saplings currently represent only 11% of the total forest. The overall growth rate for the forest is up 10% since the last inventory, but it is slowing down. The numbers also don't tell the truth in terms of timber availability which relies on a complex set of factors. McWilliams says, "We've got to evaluate sustainability for everything, not just timber, but soil, water, ecological diversity, wildlife, and recreation. By considering all the pieces of the puzzle we can look at different ways to move this big block of forest land we've got into the future." ■

TMDL Rules Withdrawn!

On March 19, the Environmental Protection Agency (EPA) published the withdrawal of the Total Maximum Daily Load regulations issued by the Clinton Administration in August 2000. The Clinton regulations were controversial from the time they were proposed in 1999. Almost simultaneous with their issuance in 2000, Congress passed a law preventing the regulations from going into effect and ordered various studies of their effectiveness. The TMDL program is a backstop measure by which states target waters that remain polluted after technological remedies have been applied to known sources. Various lawsuits were filed challenging the 2000 regulations, including one by AF&PA. EPA obtained a suspension of the litigation through April 2003 to allow it time to further review the TMDL program, the 2000 regulations and the studies ordered by Congress. EPA has not decided to continue with the pre-2000 reinstated regulations or to propose a new set of revisions. The agency had floated several ideas last year under the heading of a "watershed rule," but has now made clear that it has no schedule for proposing a new rule. ■

SFI of PA IC Member

Charlie Brown
of
Glatfelter Pulp Wood Co.

Growing up north of Pittsburgh, Charlie Brown's interest in the outdoors stemmed from his passion for hunting and fishing. Charlie learned from his grandfather—an avid outdoors-man who knew the trees and how to identify them. In high school, Charlie knew he wanted to go into Forestry. He went to Elizabethtown College which had a Forestry program affiliated with Duke University. He earned a Bachelors of Science from Elizabethtown and a Masters of Forestry from Duke. During his college summers, Charlie worked for Koppers, a manufacturer of treated railroad ties, marking boundary lines and cruising timber on their lands in Tennessee, West Virginia, and Virginia. These experiences taught him how to deal with a variety of people in a business environment. Currently Charlie lives on a 20 acre tree farm outside of Spring Grove with his wife, teenage daughter and son. They grow Norway Spruce and Douglas Fir as ball and burlap nursery stock, selling them wholesale to different nurseries. His kids raise sheep through the very active York County 4-H club.

Charlie graduated into the stagnant economy of the late 1970s but found a position at Glatfelter Pulp Wood Company in the Tree Farm Family Program dedicated to private landowner management assistance. The position involved writing management plans for private landowners and procuring wood from them either using company logging crews or contract loggers. Glatfelter has always stressed the importance of private landowners–where most of their wood comes from and managing their lands in a sustainable manner. In 1981, Charlie moved into the position of Area Forester which entailed managing company land and buying chips and enough timber to keep three Glatfelter logging crews busy. Charlie became District Manager for Pennsylvania in 1993, supervising the Area Foresters and the forester running the logging operations throughout the state. The District Manager position gave Charlie more exposure to land management activities than his Area Forester position, which was concerned with a small amount of company lands around Spring Grove. In 1999, Charlie became Wood Procurement Manager for the mill, his current position.

Forester Charlie Brown in front of the chipper at Glatfelter facility in Spring Grove.

He is responsible for budgeting and purchasing all the wood that comes into the mill and coordinating the monthly deliveries. As Charlie says, "The bottom line, 'is don't run out of wood' and the top line is, 'don't have too much.'"

Glatfelter is an American Forest and Paper Association Member Company and is dedicated to the training efforts of the SFI program. Charlie recalls, "Even before SFI, we made training sessions available to our loggers and suppliers. Now, with SFI, we have a greater opportunity to accomplish significant logger training. We have always felt SFI has a lot of positive things to offer the loggers out there on a daily basis. Our company was active in getting the training program started, by serving on the Training Committee, providing Training Coordinators, facilitating courses, and generally getting the whole SFI training program up to speed. The SFI program reflects the Glatfelter Pulp Wood Company philosophy: it is responsible business to practice good forestry. We want to encourage that type of thinking, not only in our company, but in our supplier force as well. We want to see the level of professionalism increase in our supplier base and SFI is a good program to make that happen. SFI training is going to help them manage their business in an efficient and profitable manner, as well as creating a better work environment for their employees. In order to be successful among the loggers, we have to provide training that they can readily see the value in. You can't fool them. If they do not see the value, they won't attend. Our company has not made it a policy of making training mandatory in order to buy wood from suppliers—though we are certainly encouraging them to attend courses."

The value of SFI training is being recognized by their suppliers, as Charlie's records attest. In 1995, 7% of Glatfelter's gatewood was supplied by SFI trained loggers, by 1999, 47% was supplied by trained loggers, and presently, 75% of their gatewood volume comes from SFI trained loggers.

The closing of several large pulp mills in the northern part of the state has reduced the market demand for an abundant supply of pulp wood from the forests of Pennsylvania. Charlie says, "We have a lot of resource out there that is not being utilized. If every timber harvest was required to utilize all the material on the job, there would not be enough markets to absorb it all. With our proximity to Washington D.C. and Baltimore, we are able to take advantage of the fiber that is a result of land development. We have tried to make a market here for that fiber rather than land-filling it." Competition is often over a limited labor pool rather than the resource itself, though Charlie is quick to note, "Whoever controls the stumpage controls the destination of the resource. The area we are buying out of has very high quality sawtimber, so we are competing against sawmills for buying wood. " But Glatfelter is also competing for loggers and truckers who can make more money cutting and hauling premium sawlogs than pulp wood. On the other hand, pulp wood tends to be a very stable market with little price fluctuation, and the suppliers like it because it so dependable. Glatfelter purchases a 50-50 mix of softwoods and hardwoods with 40% of all their pine coming from PA. They make high quality white papers, book publishing grades, and envelope converting grades that are used in Hallmark Greeting Cards. They also produce specialty grades of different paper coatings, which are sold to the U.S. Postal Service for printing stamps—both the stamp paper and the release paper.

Glatfelter's location is in an area of the state that is fairly populated and therefore subject to more regulations and township ordinances. Charlie has found that some conservation districts are more aggressive than others, especially in suburban areas where a logging crew may be cutting in a woods bordering a development. Regulatory pressures are an ongoing factor for Glatfelter who maintains a good relationship with local officials and strives to comply with the different ordinances.

Charlie is encouraged by the growing number of forest landowner groups across the state, because it shows that people are interested in properly managing what they have. He feels that landowner responsibility, combined with the SFI training, will pay dividends in the future. ■

PA Game Commission Initiates Deer Management for Landowners

The Pennsylvania Game Commission will start accepting applications from eligible landowners for enrollment in the agency's new Deer Management Assistance Program (DMAP). This is the agency's newest program designed to help landowners manage deer on their properties.

In the 2003-2004 hunting license year, DMAP applications will be accepted for only public land and private land enrolled in one of the Game Commission's public access programs (Cooperative Farm Game, Cooperative Forest Game or Safety Zone). Qualified applicants must be the owner or lessee of private lands, or authorized officers or employees of the political subdivision or government agency with public lands. Landowners may obtain DMAP applications from the Game Commission's website (www.pgc.state.pa.us), the Bureau of Wildlife Management in Harrisburg, or one of the Region Offices and return it to the Game Commission by July 1. In addition, a map describing the property boundaries must be enclosed with applications. Coupons for DMAP antlerless deer harvest permits may be issued to landowners at a rate of one coupon for every five acres in agricultural operations or one coupon for every 50 acres for all other landowners. Management plans will be required only when an applicant for DMAP requests more than the standard rate for issuance of DMAP harvest permits.

Landowners must designate their boundaries in a manner approved by the Game Commission. Landowners will receive one coupon for each DMAP permit allocated for their property. Landowners may not give more than one DMAP coupon to a licensed hunter, who will then apply to the Game Commission for the DMAP harvest permit. Landowners may not charge or accept any remuneration for a DMAP coupon. Hunters may possess only one DMAP permit for a specific DMAP area in any given license year. DMAP permit allotments will be made separate from the general antlerless deer license allocations, and will cost $6 for residents and nonresidents.

After July 1, hunters interested in obtaining a listing of DMAP properties should consult the agency's website or mail a self-addressed, stamped envelope along with a letter indicating their county of interest, to the Game Commission Region Office responsible for that particular county.

In Brief

IC Member Jeff Kochel Promoted

SFI of PA Implementation Committee member Jeff Kochel has been named northern regional manager for Forest Investment Associates (FIA), a timberland investment firm based in Atlanta, Georgia. In his new position, Kochel will assume responsibility for all the timberland management activities in FIA's northern region and management of FIA's Smethport office. Current FIA holdings in the northeast are located in PA and NY. Jeff is responsible for handling possible land purchases from Maine to West Virginia, Wisconsin, and upper Michigan.

New Life for IP's Former Clinton County Mill

First Quality Tissue is planning to enter the consumer tissue market with a 70,000-ton/year machine and a converting line for folded and rolled tissue, towels and napkins. Production is planned for the 3rd quarter at the new mill on the site of International Paper's old Lock Haven Mill in Clinton County.

Finley Promoted to Full Professor at PSU

SFI of PA Implementation Committee member and training instructor, Dr. Jim Finley, was recently promoted from Associate Professor to Professor of Forest Resources at the Pennsylvania State University. Finley's contributions to the SFI of PA have been numerous, including course design as well as instruction. Finley coauthored and instructs three of SFI of PA's most popular courses: Forest Ecology, Sustainable Silviculture, and Wildlife. He is currently helping to plan the SFI of PA and PSU symposium on Managing Logging Risk and Liability for October 2, 2003.

Dr. Jim Finley instructing a Forest Ecology course in Dauphin County.

FRA's spill kit can help loggers respond quickly to in-woods fuel or lubricant leaks.

FRA's New Hazardous Spills Kit

The Forest Resource Association (FRA) has developed a compact, inexpensive kit to enable people who work in the woods to take quick, effective action on petroleum-based spills and avoid environmental damage and costly fines. The #9040-FRA Combo Vehicle Spill Kit (available from Breg International), contains mats, "snakes," plugs, putty, and disposal bags. It provides an effective "first aid" for the kinds of in-woods spills loggers are most likely to encounter. "If a hazardous substance is involved, loggers are responsible for taking action to protect soil and water quality, no matter how small the spill," says FRA Chairman Allen Bedell. "For our members, spill avoidance and responsible clean-up are action areas."
To order the spill kit, call 1-800-433-1013, and request the #9040-FRA Combo Vehicle Spill Kit. The cost is $38.00 plus shipping.

Wirth & Glover join as New SFI of PA Regional Training Coordinators

Foresters Jonathan Wirth of Pine Creek Lumber Co. in Mill Hall and Joe Glover of Plum Creek Timber Co. in Brookville, have volunteered to be new SFI of PA Regional Coordinators. Jonathan will be working with Regional Coordinators, Mel Lewis (Lewis Lumber) and Todd Waldron (Craftmaster Manufacturing Inc.), to plan and coordinate SFI of PA training courses in the north central part of the state. Joe Glover will be initiating courses in the western region along with Carol Custead (Custead's Sawmill) and Dan Evans and Luke Dillinger (Weyerhaeuser Co.). The knowledge and enthusiasm that both Wirth and Glover bring to the SFI of PA Training Program will serve their regions well and in their course presentations.

Partners Program Spotlight:

Tuscarora Hardwoods

Procurement Foresters Dan Long and Jeff Halley in the foreground of the Tuscarora Hardwoods complex in Perry County.

Tuscarora Hardwoods is situated in rural Perry County—a county that does not have a single traffic light, a fact residents are proud of. With 110 employees working two shifts, Tuscarora Hardwoods is one of the largest employers in the county. Started twenty years ago by general manager Aquillas Peachey, with a portable sawmill, Tuscarora now produces 18 to 20 million boardfeet of dimension lumber annually for furniture and flooring. The mill has 10 to 14 logging crews fanning out across the state in a 130 mile radius cutting wood. Tuscarora also produces 50,000 tons of mulch sold to landscapers and nursery operations in roughly the same geographic radius. They employ four procurement foresters and four field foresters to maintain a steady volume of wood. The facility at Elliottsburg has nine dry kilns which can hold 450,000 board feet. The company also manages 4,000 acres of their own forest land which is thinned as needed. The primary species Tuscarora processes are red oak, white oak, and yellow poplar. Most of the low grade logs are sold to other mills to be made into pallet lumber. On the high end, they sell their veneer logs to various veneer manufacturers.

Ninety percent of Tuscarora's wood is procured from private landowners. Foresters Dan Long and Jeff Halley make it a standard practice to hand out SFI of PA Landowner packets to the landowners they meet. Dan says the packets help "smooth the way" and reassures the landowners that Tuscarora has their best interest in mind. Dan elaborates, "Most landowners have never heard of SFI until I bring the subject up. The SFI of PA landowner packets take the edge off their attitude and shows it is not just me, the forester, trying to persuade them, that they are doing the right thing by managing their forest. They like the fact that the packets are from an independent agency and not Tuscarora. I promote it as an oversight organization." Jeff adds, "The landowner packets show resource management done the right way. The landowners appreciate that and feel secure with it, especially in light of media's green agenda. In this area, people have seen bad forestry practices over the years. The packets give us support because the information describes what is going to be done and how the operation will be performed. It is comforting for the landowner to know they are not going to get a bad job and their property will not look like a bomb went off." Dan comments on job appearance, "The further south you go the more important the aesthetics are. Most of the woodlots I deal with can be seen from four sides, I am cutting on the edge of suburban developments."

Tuscarora strives to keep at least 50% of their logging crews current with SFI training. The other 50% are watched and taught by those who have been through training. The foresters who have been through SFI training likewise pass on their knowledge to the logging crews they are responsible for. Dan Long feels the bottom line for good forestry practices is driven by available markets. He says, "We must continue to develop markets for the low grade material because nobody is going to do it for free or at a loss. We do our best to remove as much as possible. Sometimes we have to leave it. Pulpwood is an outlet but an inconsistent market depending on how much the mill has."

Jeff Halley was one of the first foresters hired by Tuscarora fifteen years ago and has winessed the steady growth of the mill. He recalls the destructive fire in 1989 which led to upgraded equipment. The mill was rebuilt with band saws, a band head rig, and a band resaw, and subsquently their production took off. Tuscarora uses little advertising to procure wood—a couple of newspaper ads, some cold calls, but mostly word of mouth. Jeff says, "I have a lot of repeaters. When you have been around a number of years, and you do things the way you should in your forest practices you can repeat cut." Dan adds, "The pressure is on the resource—I see tracts I feel shouldn't be cut being cut, and harder than they should be. In the southern part of the state they worry about ordinances—that ten years from now they won't be able to harvest." He is also concerned about urban sprawl taking over forest land on a consistent basis. Dan sees the need to educate local governments and feels SFI gives industry the credence and justification in the face of anti-forestry communities. Dan states, "The Industry has its work cut out for itself, both in terms of education and making sure the resource is here twenty-five years from now. Otherwise we'll have to learn how to market black gum and other undesireable species."

Dan observes, "Stumpage prices go up but they never seem to come down, not in correlation to the fluctuation of lumber prices. Once a landowner gets a taste of the high dollar timber, and I go to buy it at lower rate because the timber prices have fallen, they say, 'why should I sell now?' Landowners are better educated in my area now. They watch the markets closer, they seek information." In a dollar driven market, sustainable forestry sometimes suffers and looses out to those who would take the best seed trees. Dan elaborates, "If we are bidding on a tract, and mark the stand for single tree selection and remove undesirables—leaving some nice growing stock, thinking toward a 15 year rotation—and someone else puts in a bid cutting the growing stock, we lose and the forest loses. Landowners have a hard time saying no to the money, even though we try to educate them. With real estate changing hands every ten years, how do you promote long term forestry? We try to do the right thing. By the same token, we have a mill to feed."

Both Jeff and Dan are involved with forestry education in the public schools, believing that an actual presence in the classroom is needed to offset some teachers' bias toward logging. Dan says, "Those multimedia forestry education boxes HLMA (Hardwood Lumber Manufacturing Association now the Pennsylvania Forest Products Association) sent to all the school districts are great. But if the teacher is against logging, they sit on the shelf. That is why you've got to get in the schools yourself." Dan coaches Envirothon teams, from third grade through twelfth, and Jeff gives forestry lectures at the middle school and high school for "Career Days." Both Dan and Jeff are doing their part in spreading the concepts of sustainable forestry. ■

Sustainable Forestry Research Update

by
Susan Stout
Project Leader, USDA Forest Service, Forest Sciences Laboratory
Jim Finley
The Pennsylvania State University, School of Forest Resources

Eighth in a Series

Introduction

We began this series in the Winter issue of 2001 with a review of research already completed that helped Pennsylvanians understand how to practice sustainable forestry. In this issue, we provide an update in which we highlight some current research that is leading towards even better stewardship of the Commonwealth's forests.

Oak Regeneration Project - Penn State and the Bureau of Forestry

This year begins the eighth-field season for the Bureau of Forestry regeneration project at Penn State led by **Kim Steiner**, **Jim Finley** and **Marc McDill**. The project was designed to evaluate how various treatments used by the Bureau of Forestry influence successful regeneration. In almost all cases, treatments have involved fencing or herbicide application, alone or in combination, or the sites were untreated because good regeneration was anticipated. Some sites received enrichment plantings of nursery seedlings. All treatments were financed by the Bureau's regeneration account, which allocates ten percent of the state's timber receipt income to practices to ensure successful regeneration.

This is a long-term project that now includes 61 harvest sites and thousands of data points. Field crews measure each site prior to harvest or any pre-harvest treatment. Subsequently, in the field season after the harvest or treatment, we measure the site again, and then again every three years. As a result of this intensive data collection we are building an in-depth understanding of treatment impacts and regeneration responses, especially in oak-dominated forests, which make up the large majority of sites under study.

Currently three graduate students are working with the project and the following three summaries address their work in turn.

Classifying Patterns of Vegetation in Mixed-Oak Forests of Pennsylvania

Melanie Northrup, M.S. candidate, is studying understory competing vegetation, a major biologic and economic concern in certain areas of Pennsylvania because it interferes with the establishment and growth of desirable tree seedlings, thus influencing community composition and structure of mixed-oak stands. The primary objective of this study is to identify and describe understory vegetation patterns in Pennsylvania's mixed-oak forests by means of multivariate statistical techniques. A secondary objective is to determine if these vegetation patterns or pretreatment understory conditions influenced regeneration success.

We used 1208, 20th-acre sample plots, 12 variables (species) and 4 composite variables in the analysis. The analysis has revealed eight vegetation classes that are significantly different in respect to species composition. Initial results show a statistically significant difference between establishment, growth, and survival of oak seedlings and vegetation classes. This classification scheme provides basic information about understory community composition and stand structure in mixed-oak forests and the influence competing vegetation may exert on the growth of oak and other desirable tree seedlings in advance of harvest.

Quantifying Stocking in the Early Stages of Stand Regeneration

Songlin Fei, Ph.D. candidate, has begun a study to develop a stocking diagram for regenerating forests in central Pennsylvania Stocking level is defined by a combination of cumulative tree height (rather than basal area, as in most stocking guides) and seedling density. Cumulative tree height, as a surrogate measure of biomass, has advantages over diameter-based measures when dealing with seedlings. Maximum stocking lines and "B-level" stocking, the level of full site occupancy, have been identified. The next step is to develop a regeneration index as a measure of relative regeneration success. The flexibility of the new stocking diagram will permit its use to assess regeneration potential throughout stand development.

Silvicultural Guidelines for Oak Regeneration

Peter Gould, Ph.D. candidate (with partial funding from the PA Hardwood Development Council) is working to produce silvicultural guidelines for attaining regeneration in mixed-oak stands in Pennsylvania. The guidelines will provide forest managers with a tool to measure regeneration potential of oak stands in advance of harvest. In addition, the guidelines will recommend remedial treatments for stands with inadequate oak regeneration. The guidelines will be research-based, relying on a large quantity of data collected in Pennsylvania oak stands, and specifically tailored to local conditions.

US Forest Service Research Lab in Warren, PA

The team at the US Forest Service Lab in Warren, PA, is working on several fronts to develop guidelines for sustainable forestry. In many cases, scientists from other Forest Service labs including those in Morgantown, WV, Delaware, OH, and Durham, NH are collaborating to strengthen the research. Some of these efforts are described below.

Oak Regeneration Research

The oak regeneration problem can be easily summarized as the harvest of mature mixed-oak stands when the probability of a new oak stand forming to replace the existing one is either low or nonexistent. In other words, we harvest oak stands at the wrong time. To overcome this problem, scientists from the USDA Forest Service laboratories in Irvine and Morgantown including **Dr. Patrick Brose**, **Dr. Kurt Gottschalk**, and **Dr. Gary Miller** are collaborating on a pair of studies examining how oak seedlings develop their root systems. It is well understood that oak seedlings emphasize root development and resprouting ability instead of stem growth and these traits puts them at a severe competitive disadvantage against faster-growing hardwoods such as red maple and sweet birch. These studies look at how fast oak seedlings develop their root systems under different amounts of sunlight, how quickly they develop their resprouting ability, and how large the root systems need to be before oak seedlings are ready to compete against other hardwoods. The studies are being done throughout Pennsylvania to incorporate any regional differences. Once the studies are completed, existing oak management guidelines will be revised so foresters and landowners will better be able to schedule timely timber harvests instead of ones that replace mixed-oak stands with low-value hardwoods.

Deer, Herbicides, and Acid Soil – Results From a Long-Term Study

Dr. Stephen B. Horsley has been studying the regeneration at 4 northern hardwood forest sites in Potter County designed to investigate the impacts of deer, acid soil and interfering plants on forest soils and regeneration establishment. Well-maintained fences were used to address deer impacts, 10 tons per acre of dolomitic limestone was used to address

acid soil and a single application of 2 pounds active ingredient per acre of glyphosate (as Roundup herbicide) was used to address vegetation impacts. The treatments were applied in 1985. Evaluation of one- to four-inch diameter sapling regeneration on fenced, limed, and herbicided plots 15 years after treatment showed that fencing was the only one of these 3 factors that had a long-term impact on stand development. While lime had important impacts on soil chemistry, it caused no differences in basal area of the species present that will form the new stand including black cherry, pin cherry, American beech, striped maple, and birch. Survival of sugar maple seedlings was significantly higher on limed plots, but because few sugar maple seedlings were present at the beginning of the experiment and there was little seedfall until 5 years after treatment, sugar maple did not become a part of the established regeneration. We conclude from these data that deer were the primary factor controlling species composition of regeneration.

Understory Vegetation Recovery Following site Preparation with Herbicides

When the level of competition among plants in a forest understory is high, a diverse assemblage of desired tree species cannot be achieved without site preparation and increasing light levels reaching the ground. In northwest Pennsylvania this means using herbicide to control competition in favor of desirable tree species establishment, and partial overstory removal to increase understory light. Herbicide use sacrifices all vegetation present on the ground at the time of application. Research completed by **Dr. Stephen B. Horsley** and others showed that diverse tree species become established in forest understories using these methods. Less has been documented on the effects of herbicide treatment on herbaceous plants. **Todd Ristau** and others are conducting studies to improve our understanding of these effects. Available research and observations have shown that herbaceous plant composition is only temporarily altered, and that recovery occurs within three to five years. New studies will examine the mechanism by which plants are able to recover after herbicide application. In particular, we are looking at the role of viable buried propagules (seeds, corms, bulbs, spores, and plant fragments) in achieving this recovery. Herbicides will be applied at three sites in Pennsylvania. Changes in species composition and the role of the propagule bank in recovery of vegetation will be assessed. Understanding how plant species are affected by site preparation and how they are able to recover from treatment will further our efforts to keep all components of an ecosystem intact while extracting valuable timber resources to meet societal demands.

Deer, Fern, AND Small Mammals

Alex Royo is investigating the extent to which white-tailed deer herbivory, competition from the native invasive hay-scented fern, and small-mammal seed- and seedling predation work, alone and in concert, as obstacles to regeneration and possibly shift the very species composition of these forests. Specifically, our work focuses on the fates of individually marked seedlings to gain detailed information on seedling germination, growth, and survival. Early results from these studies confirm prior findings that deer herbivory results in a reduction of growth of black cherry seedlings. Additionally, we found that removal of hay-scented fern increases growth and survivorship of black cherry and provides an opportunity for a germination burst for several other shade-intolerant species like red maple, white ash, and birch. Furthermore, the findings indicate that this germination burst results in increased diversity of the seedling layer, and that this increase is greatest only where deer were removed. Finally, preliminary experiments demonstrate that seed predation by small mammals underneath fern cover is more intense and more selective, with the mammals preferentially choosing the larger-seeded species, like beech and sugar maple, over the smaller seeded species.

Sustaining Forest Bird Communities

To be considered truly sustainable, forestry practices should sustain populations of wildlife species that inhabit forest habitats. Birds can be particularly useful indicators of forest health because they are diverse, often habitat-specific, and easily monitored in a non-intrusive manner. **Dr. Scott Stoleson** is reviewing studies from the wildlife literature on the effects of silvicultural practices on breeding bird communities, with a focus on northern hardwoods. Most published studies have compared avian abundance and species richness among stands that have been clear-cut, group cut, and unharvested. Very few have looked at the effects of shelterwood cuts or 2-age management. Interpretation of study results is complicated by a lack of uniformity in methods and in the responses measured, but several common patterns are evident. First, overall abundance of birds tended to be greatest in young regenerating stands, intermediate within intermediate treatments, and lowest in mature, uncut stands. The bird species encountered varied with stand age, with almost complete species turnover from young clearcuts to mature forest. As a consequence, species diversity within a stand tended to be greatest in partially-cut stands, since those supported birds associated with both young and mature forests. At a larger landscape scale, species diversity may be maximized by maintaining a mosaic of stands of different ages, regardless of the actual silvicultural treatment. Of course, numbers of birds or species alone tell only part of the story. Few studies have looked in-depth at how silvicultural practices might affect nesting success or the probability of brood parasitism by cowbirds. What data there are suggest nest success may depend more on individual species, treatment size, and landscape factors than any particular silvicultural treatment.

Carbon Storage & Forest Stand Structure

In 1975, a study was begun to learn how to thin Allegheny hardwood forests to produce productive, healthy stands. As part of that study, some areas were thinned in ways that changed the distribution of size classes of trees: stands were thinned from below, removing the smallest trees, from above, removing the largest trees, from the middle, removing the medium size trees, and in combination, removing saplings and commercial trees of poor form. Some plots were left untreated, as controls. A study conducted by **Dr. Coeli Hoover** showed that after 25 years and two treatments, the plots that were thinned from above had much lower rates of carbon storage than any other treatment, including unthinned plots, while the plots that were thinned from below or in a combined thin had the greatest rates of carbon storage. Plots that were thinned from above or from the middle had a loss of growing stock volume over the 25 year period, while growing stock volume increased in the combined thin, thin from below, and control plots. Changing the structure of these Allegheny hardwood stands affected both carbon storage and stand growth, and these changes were often quite large, with long-term consequences for the future growth of the forest.

Overview

As these thumb-nail summaries suggest, sustainable forestry research is thriving in Pennsylvania. **Dr. Jim Finley**, **Dr. Tim Pierson**, and **Dr. Susan Stout** have been working with the SFI Training Program to incorporate existing research results into the Sustainable Silviculture course, and their efforts are reflected in the Timber Unit Sustainability Assessment Form developed by an SFI subcommittee, headed by **Jeff Kochel**. As results from the studies described here accumulate, they too will be folded into the tools that SFI shares with participants and cooperators. ■

Partner Spotlight:

Mt. Valley Farms & Lumber Products, Inc.

Vice president, Mike Taylor, in charge of marketing, sales and production, inside the Mountain Valley Farms sawmill.

Surrounded by 250 acres of apple orchards in Adams County, Mountain Valley Farms and Lumber Products is a 4th generation business run by the Taylor family. Vice president Mike Taylor views the adaptability to the times and the diversity of product as a key to Mountain Valley's success. Mike extols his philosophy, "The only constant in the world is change. Every morning I wake up and ask myself, 'What can I change today to make my business better?'"

Mike's great grandfather, Charles Taylor, was a land developer who modernized local farms and ran a portable sawmill. His son, Ken, supplied pulp wood to Glatfelter while clearing woodlots for his father. Over time, one of the modernized farms became a modernized sawmill. Mountain Valley is now totally computerized, with each log having its own bar code to track it to the finished product—and the products are numerous.

The company's electronic infrastructure of computers and palm pilots also allows them to buy better timber with fewer foresters. Mountain Valley is one of the top five pallet producers in the state, building pallets for everything from paper to concrete.

Situated in the heart of Pennsylvania apple country, Mountain Valley leases, recycles and repairs white oak apple crates/pallets used by Motts. They also produce lumber for furniture, mulch, sawdust, firewood, and Blue Mountain Fire Logs. These fire logs are distinctive in their triangular "flame" box, (designed to have 'shelf-presence') which ignites the six kiln-dried sawdust fire logs inside. The logs have no wax, chemicals, or binders in them and are held together by the natural lignin in the wood. They are made from hardwood waste taken from local furniture manufacturers and diverted from landfills. Mountain Valley has been making Blue Mountain Fire Logs for ten years but only six months with the new packaging which has boosted sales.

Currently, Blue Mountain Logs account for less than 1% of Mt. Valley's total business, a situation they are hoping to change. Seventy percent of their business is pallet related, including assembled wood products and low grade cut-to-length lumber. Twenty percent of their business is in sawmill lumber sales—veneer logs, grade lumber, and railroad ties. The remaining percentage is in apple orchards (over 400 acres) and a freight business. All of these reflect Mt. Valley's business philosophy, 'success through diversification.' Or as Mike states, "The other products help keep the sawmill afloat."

One of several things that makes Mountain Valley unique is the job responsibilities of a given employee position. For example, the sawyer is in charge of the mill operations. Both foresters are also salesmen—they procure the wood which they then in turn sell as grade lumber. Mike comments, "We analyze our procedures in how we do things. We always work toward a sustainable profit."

Mike is fluent in Spanish, a second language he learned at the sawmill in order to communicate more effectively with his workers, who are mostly Mexican immigrants. It is logical that Mountain Valley would tap into a large Mexican labor force already in place for the substantial apple industry in Adams County. They currently have about seventy employees running two shifts at the mill. Mike believes in good employee relations, which means keeping them educated and informed as to what the goals of the business are and how to obtain those goals. The benefit is employee loyalty. At this point in time, three generations of Taylors have hired the employees who work in different areas of their diversified business.

Foresters Larry Wintermeyer and Paul Scarlata are in charge of estimating and buying timber, usually working from a database. They do not buy bid timber because as Mike says, "The worst thing that has ever happened to sawmills is the consulting forester. In my opinion, when you put a forested tract up for timber auction you might get a little more. So if the consulting forester is getting a twenty percent commission, are you going to get twenty percent more at auction? What is the relationship? You have no relationship. You have no agreement with anyone. We have lost a lot of money dealing with consulting foresters. It hurts the landowner as well, because the price of timber is inflated through the bid process, and the landowner thinks it is worth more than it really is. We would rather pay less and do the job right, not cut certain trees that shouldn't be cut, and pay attention to erosion and aesthetics, leaving behind a good impression." Mike stays out of the forestry end of the business unless there is an emergency. Instead he concentrates on the pallet/mill sales. Over the decades Mountain Valley has made a lot of friends in the region, which helps with timber procurement and sales. They support many different organizations (hunting clubs and landowner groups for example) who prefer to sell their timber to Mountain Valley when the time arises.

Mountain Valley has two subcontracted logging crews in the woods cutting full time. They supply the sawmill with enough wood to produce two million boardfeet of lumber annually. Both crews as well as the foresters attend SFI of PA training courses. ■

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Redesigning a product: The old Blue Mountain Fire Log box—plain, lacking shelf presence and difficult to light, next to the more marketable new fire log package.

Worth Considering

At the SFI of PA, we often hear from loggers and foresters that they want to do the right thing in terms of not high grading a stand. Generally, the concern is expressed along the lines that the landowner is looking for the maximum amount of dollars from the harvest, which usually translates into a diameter limit cut. And, the description goes on, if I don't do it someone else will.

When dealing with this type of situation, we ask that you consider offering two bids to the landowner. Quote them on the diameter limit cut —the high grade harvest, and then give them a price for a sustainable harvest, one where the emphasis is on what is left as opposed to what is cut. Also, explain to the landowner that with the high-grade, they most likely are not going to have any more income producing cutting opportunities on the stand for a very long time. But with a sustainable harvest now, in not too many years (10 to 15) an additional harvest can be conducted. The two harvests combined will almost always produce far more total income than that rendered from a single high-grade harvest now. And the stand itself will have a far more promising future in terms of producing desirable, high quality timber.

We know it's difficult to sell sustainable forestry to those who are thinking only in terms of maximizing the dollars yielded from a timber harvest. But it's not impossible. Work with them on looking at the big picture, but protect yourself by giving them the quote they think they want to see as well. It might be that through this approach, we can have more decisions being made in your favor with an emphasis on sustainable forestry practices. Then everybody wins. ■

Managing Logging Risk and Liability Symposium

A recent court case in Pennsylvania involved a logger who was severely and permanently injured by a danger tree. The jury awarded him a settlement of six million dollars. An appeal has been filed so the final outcome of the case won't be known for some time. Several very important issues came to light in this case. One of these was the stark reality that most of us—landowners, loggers, foresters, mill owners—do not have a good understanding of our responsibility when it comes to timber harvesting and danger trees. The SFI of PA will try to help by offering a symposium, **Managing Logging Risk and Liability**, on **Thursday, October 2, 2003**, at the Bryce Jordan Center on the University Park Campus of Penn State. It will be a full-day program with knowledgeable and extremely well-qualified speakers addressing site disturbance, risk management, Occupational Safety and Health Administration (OSHA) Standards, contracts, insurance, and more. SFI of PA Continuing Education credit will be awarded for those who attend and apply for it. ■

SFI of PA Program Partners

Partners Program Participants are committed to the SFI Standards and pay a set fee annually based on sawmill production from Pennsylvania sawlogs.

Appleton Papers, Inc.(6)
Baker's Lumber Company, Inc. (5)
Blue Ox Timber Resources (5)
Bonham Log & Lumber, Inc. (5)
Brode Lumber (5)
BroJack Lumber Company, Inc. (3)
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Brookville Wood Products (5)
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Champion Lumber Company, Inc. (4)
Clear Lake Lumber (5)
Cornerstone Forest Products (6)
Craftmaster Manufacturing, Inc.(2)
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The Glatfelter Pulp Wood Co. (8)
Heacock Lumber (3)
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R.J. Hoffman Lumber (3)
Hyma Devore Lumber (5)
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Mt. Valley Farms & Lumber Products (4)
Ongley Hardwoods (3)
Ordie Price's Sawmill (3)
P & S Lumber Company (3)
Patterson Lumber Co. Inc. (3)
Pine Creek Lumber (6)
Plum Creek Timber Co. (2)
RAM Forest Products (6)
Salem Hardwood, Inc. (1)
Solt's Sawmill (4)
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Sterling Forest Products (3)
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Weaber Inc. (8)
Wheeland Lumber (6)
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**denotes new company*
()= years as participant
Visit our web site for e-mail addresses (✉) and web site links (🖱) for these Partners and Supporters!

SFI of PA Program Supporters

Supporter Companies help to promote sustainable forestry practices and pledge meaningful financial contributions.

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Hobbes Forestry Services (3)
Horizon Wood Products (3)
Keystone Chipping, Inc. (2)
Noll's Forestry Services, Inc. (3)
*Northern Tier Hardwood Assoc.
Ochs Forestry Consulting, Inc. (1)
Penn State University (2)
(Forest Land Management Office)
Pennco International, Inc. (1)
TimberLeads, Inc. (3)
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SFI of PA In Action

Participants in the *Estimating Standing Timber* course held in Prince Gallitzin State Park in Cambria County, measure trees on a series of forest plots and then estimate the board feet.

Newly appointed Secretary of the Department of Conservation and Natural Resources, Michael DeBerardinis, at the PA Farm Show press conference.

Dr. Steve Bick discusses measurements for a double stem tree during the field exercises for the *Estimating Standing Timber* course.

SFI of PA Communications and Training Manager, Ray Noll III and his dad, forest landowner Ray Noll Jr., man the Hardwood Development Council's Woodmobile at the Pennsylvania Farm Show.

Former president of the Pennsylvania Forestry Association and logging safety specialist, Mike Ondik, talks about working with hazard trees. Speaking to over 100 loggers assembled at the Safety Meeting Mike said, "You guys are a special breed, but you are not invincible. Every tree is a danger tree and a potential killer."

Project Leader for the USDA Forest Service, Forest Sciences Laboratory, Dr. Susan Stout discusses the new Treatment Unit Sustainability Assessment Form (TUSAF), she and forester Jeff Kochel designed for timber harvesting, at an SFI Implementation Committee Meeting.

At the 35th Annual Loggers and Sawmillers Safety Meeting in Kane, independent logger and former SFI of PA Training Manager, Martin Melville, gave a moving testimonial on the dangers of working alone in the woods, based on his own logging accident.

Continuing Education Courses Completed since January 2003

Core Training Completed

Since January 2003 the following individuals have completed Core Level training with the SFI of PA. Core Level Courses are First Aid & CPR, Logging Safety, and Environmental Logging.

Doyle Baum	Schuylkill Haven
Brandon Bevan	Lebanon
Dennis M. Brehm	Lebanon
George Chilson	Elmira, NY
Ted Christine	Tyrone
Leo W. Coble, Jr.	Allport
Kenneth L. Eyer	Tyrone
Paul Fremer	Brockway
Andrew Scott Fremer	Brockway
Tony French	Centre Hall
Joe Geczi	Columbia, NJ
Wesley Geczi	Columbia, NJ
Mike Geiser	St. Marys
Robert M. Grove	Sheffield
Charles Hemphill	Genessee
Roy Hubler	Drifting
Michael Kaminski	Sayre
Timothy Kasharian	Columbia, NJ
Richard Killian	Orwigsburg
Joseph Kocjancic	Johnsonburg
Randy Leeper, Jr.	Acme
Allen Liegey	Weedville
Mark E. McCall	Nicktown
Matthew T. McCanna	Lebanon
Shawn McCanna	Lebanon
AudraMitchell	Ridgway
Jerry M. Nickel	Carlisle
Bruce Payne	Kane
Larry Stark, Jr.	Ridgway
Terry Swanson	Kane
Perry Swanson	Kane
Travis Sweeney	Kingsley
Beryl N.. Weaber	Lebanon
Elvin N. Weaber	Lebanon
Scott Wolbert	Kane
Wesley Yokum	Clearville

GAME OF LOGGING I

Kevin Arnsberger	Gettysburg
Michael Baker	Fayetteville
Kevin E. Black	Chambersburg
Scott Blair	Kingsley
Robert Brown	Media
Brian Carr	New Albany
Clyde J. Cisney	Orbisonia
Todd Clark	Everett
Jerry Clark	Everett
James E. Clark	Montrose
Brent Courtright	Hamlin
Chris Crandall	Sayre
Frank P. Crandall	Sayre
Richard P. Deppen II	Collegeville
Braden D. Eaton	Dry Run
Vic Gilbert	York Springs
Joey Gilbert	E. Berlin
Jeff Goshorn	Newport
Jason Goshorn	Newport
Ted A. Graybill	Richfield
Tom Hanna	Lake Arel
Jeremiah Hornbaker	Mercersburg
Paul Iampietro	Chambersburg
Michael Jones	Ft. Loudon
James Kauffman	Fayetteville
Neal Klingler	Biglerville
Michael Kusko, Jr.	Fayetteville
Patrick J. Nardizzi	Bryn Mawr
William Nasser	Kingsley
Denis Reichwein	Bryn Mawr

Game of Logging 1 *continued*

Henry Rhinehart	Fayetteville
Andrew J. Schneck	Auburn
Lloyd Sheaffer	Richfield
John Sheaffer	McVeytown
Mark Sheaffer	Port Royal
Theodore J. Summers	Shippensburg
Willis Swope, Jr.	Lock Haven
Jeffrey A. Wartluft	Bethel
Albert Weaver	Springville
Shawn C. Webber	Orwigsburg
Casey Weicht	Everett
Zane Weicht	Everett
Gary R. Westlake	Pottstown
Jonathan Whitsel	Mapleton Depot
Christopher A. Whitsel	Mapleton Depot
James Wilson, Jr.	Forest Hill, MD

JOB LAYOUT & PROFITABLE SKIDDING

Bradley J. Allen	Grand Valley
DeWayne Allen	Titusville
Charles S. Allen, Sr.	Pleasantville
Bob Anderson	Clarendon
Travis Asel	Kane
Norm Asel	Kane
Rick Asel	Ludlow
Rob Asel	Kane
Jeff Asel	Kane
Mike Asel	Kane
Richard Asel, Jr.	Ludlow
Ryan Bright	Mt. Jewett
Pat Bright	Kane
Jason Bullers	Ridgway
Dave Clymer	Elliotsburg
Randy Depto	Kane
Mike Depto	Kane
Gerry Gardner	Ridgway
Jerry P. Grimaud	Tunkhannock
John Holt	Kane
Charles E. Housler	Kane
James M. Hulings	Kane
Steve Jaquith	Muncy
Ed Johnson	Kane
Dan Karg	Kennerdell
Gary Karlene	Kane
John Kennedy	Wyalusing
Wayne T. Kerlin	Lewisburg
Larry Kness	Hazelhurst
Lester Lapp	Port Allegheny
Curtis Leljedal	Forksville
Ben Livelsberger	Newport
Rod Luchs	Ridgway
Thomas Luchs	Ridgway
John Luchs, Jr.	Ridgway
Joe Mascioni	Wilcox
Ronald H. McCarty, Jr.	Forksville
Gordon McClintick	Byrnedale
Joe McKennas, Jr.	Tunkhannock
John Morgan	Sheffield
Richard Park	Erie
Terry Rine	Muncy Valley
Gary Rossman	Kane
Ken Spaich	Hazelhurst
Christopher Spaich	Mt. Jewett
Larry Stark	Ridgway
Dave Taylor	Port Allegheny
Dave Trimpey	Kane
Dave Wahlberg	Kane
Dan Wettlaufer	Muncy Valley
Brian Wettlaufer	Muncy Valley
John A. Williams	Kane
Paul Williams	Johnsonburg
Michael Wingard	Sigel
Stan Zimmerman	Wilcox
Marty Zimmerman	Wilcox
Scott Zimmerman	Wilcox

BUSINESS MANAGEMENT

Chris Carey	Frostburg, MD
Paul L. Custer, Jr.	Frostburg, MD
Paul L. Lepley	Meyersdale
James Olczak	Youngstown
Karen Olczak	Youngstown
David E. Opel	Grantsville, MD
Harvey Reckner, Jr.	Confluence
Ken Roberts	Cumberland, MD
Greg Shultz	Scottdale
Greg Shultz, Jr.	Scottdale
Ron Steyer	White
George Weimer	Lonaconing, MD
John A. Weimer	Lonaconing, MD
Jessica Wilhelm	Accident, MD
Chad Wilhelm	Accident, MD
Gilbert Wilhelm, Jr.	Lonaconing, MD
Henry Wiltrout	White

GPS: PRACTICAL APPLICATIONS FOR FOREST MANAGEMENT

Ronald Andrus	Gaines
Joseph Araway	Winburne
Larry Boob	Aaronsburg
Alton J. Britton	Nicktown
Joe Canfield	Damascus
Richard P. Deppen II	Collegeville
William Dunn	Beach Lake
Dale Gericke	Julian
Bill Gumble	Paupack
Al Henry	Beach Lake
Robert Hobbes, Jr.	Tunkhannock
Dan Kizer	Waymart
Allan Kowalczyk	Hawley
Paul Kowalczyk	Hawley
Dave Krumenacker	Carrolltown
Mark Krumenacker	Carrolltown
David Malsom	Hamlin
Ken Manno	State College
Mark E. McCall	Nicktown
Terry McCune	Cherry Tree
Scott Morgan	Indiana
Tom Mullen	Fogelsville
Craig Olver	Honesdale
Paul Reining	Beach Lake
E. Scane Renner	Honesdale
Ken Roberts	Cumberland, MD
Jim Rowe	Honesdale
Brian Schmoyer	Beach Lake
Patrick Sherren	Warriors Mark
Gene Shultz	Hawley
Joe Stone	Thompson
Louie Stone	Thompson
Kevin Stout	Marble
Richard Thomas	Pleasant Gap
Ron Westover	Cherry Tree
Robert Wetherill	Lake Ariel
Thomas Wieland	Spring Grove
Robin Wildermuth	Hawley
Brian Williams	Tafton

MISCELLANEOUS CE COURSES

Allen F. Liegey Benezette	Env. Log Refresher
Todd Watt Brockway	Env. Log Refresher

MD Forestry Economics & Stewardship Ethics: Facing Realities to find Sustainability

Kenneth Gibbs	Bedford
Ken Roberts	Cumberland
William J. Baer III	Bedford
Martin Melville	Centre Hall
Kenneth Klahre	Clearville
Doug Cessna	Clearville
Donald Cessna	Clearville
Dustin Cessna	Clearville

Dubois Conference: Dealing with Problem Plants Interfering with Regeneration (1/2)

Mike Wolf	Ebensburg
Malcolm Waskiewicz	Coudersport

Appalachian Forest Products Security Group Meeting

Walt Graham	Hopwood

Marketing Forest Products

Ed Mead	Warren
John Redell III	Troy
Chris Route	Troy

BUYING STANDING TIMBER

Ed Mead	Warren
Charles Swanson	Gerry, NY
Matt Swanson	Gerry, NY

ESTIMATING STANDING TIMBER VOLUME

Steve Banks	LaJose
Stan Barnett	Johnsonburg
Charles F. Brown, Jr.	Seward
Lewis Bundy	Dubois
Chris Carey	Frostburg, MD
Robert J. Elick	Cherry Tree
Dan Evans	Johnsonburg
Steve Forrester	Shippensburg
Fred Kepple	Sarver
Donald T. Kovalick	Frenchville
David Lytle	Morrisdale
Mark D. Maines	Morrisdale
Lee McCoy	Grove City
Paul Noll	Loretto
Ray Noll	State College
Regis Preston	Brockway
Benjamin A. Pupek, III	Pottstown
Daniel Rorabaugh	Burnside
Daniel Sarver	Confluence
Mark J. Selfridge	Curwensville
Doug Shaffer	West Middlesex
John Urmann, Jr.	Ridgway
Todd Watt	Brockway

GAME OF LOGGING 2

Brian Carr	New Albany
Chris Crandall	Sayre
Frank P. Crandall	Sayre

Register Now! Call (814) 867-9299 or toll free (888) 734-9366

Managing Logging Risk & Liability Symposium

Thursday, October 2, 2003

Bryce Jordan Center, University Park Campus, Penn State

$65. per person

Full-day symposium covering; Site Disturbance, Risk Management, Occupational Safety and Health Administration (OSHA) Standards, Contracts, Insurance, and more. Participants qualify for SFI of PA Continuing Education credit.

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SFI OF PA TRAINING PROGRAM NEWS

Block Scheduling for SFI of PA Training Courses

The SFI of PA Training Program will become "seasonal" with the introduction of Block Scheduling for their courses. The training blocks will be comprised of 3 six week periods in 2004.
The Benefits are numerous:

- Participants will know training is only offered during specific times of the year and make arrangements to attend.
- Easier for everyone involved to plan and keep track of the courses offered.
- Not a constant demand on limited SFI of PA staff resources.
- Advance planning for a year round schedule.
- Help cut down on the number of canceled classes due to poor registration.
- Hopefully ease the year end training rush.

SFI of PA's new courses, Job Layout, GPS for Forest Management, and Log to Lumber Yield, have been well attended. In the coming months grant underwritten courses will be offered extensively at $45. per course. They are **Environmental Logging, Advanced Environmental Logging, Job Layout and Profitable Skidding, Forest Ecology, Sustainable Silviculture, Wildlife**. Please take advantage of the savings and stay current with your training.

SFI of PA 2003 Training Schedule

Call the SFI of PA to register and for confirmation of exact location, (814) 867-9299 or (888) 734-9366. Schedule is subject to change, courses with less than 15 participants may not be held. More courses are added each month. SAF CFE credit available for most courses.

June		
Sustainable Silviculture	Friday, June 20	Hawk Mt., Schuylkill Co.
Logging Safety	Wednesday, June 25	Mifflintown
Logging Safety	Wednesday, June 25	Johnsonburg
Logging Safety	Thursday, June 26	Spring Grove
July		
Environmental Logging	Tuesday, July 1	Franklin
Job Layout and Profitable Skidding	Friday, July 18	Hawk Mt., Schulykill Co.
Forest Ecology	Wednesday, July 23	Clearcreek State Forest, Jefferson Co.
August		
Sustainable Silviculture	Wednesday, August 6	Clearcreek State Forest, Jefferson Co.
Wildlife Management	Friday, August 15	Hawk Mt., Schulykill Co.
GOL Level I	Saturday, August 23	Bucks Co.
Forest Ecology	\Wednesday, August 27	Bedford Co.
Forest Ecology (SF I)	August TBA	BOF Dist. #1 Chambersburg
Forest Ecology (SF I)	August TBA	BOF Dist. #17 Elverson
Forest Ecology (SF I)	August TBA	Mifflintown
September		
Sustainable Silviculture	Thursday, September 18	Black Forest Sportsman's Club, Potter Co.
Estimating Standing Timber	Thursday, September 18	Ricketts Glen, Luzerne Co.
Buying Standing Timber	Friday, September 19	Ricketts Glen, Luzerne Co.
Sustainable Silviculture	Wednesday, September 24	Bedford Co.
Job Layout	September TBA	BOF Dist. #1 Chambersburg
Job Layout	September TBA	BOF Dist. #17 Elverson
Job Layout	September TBA	Mifflintown